TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, January 11, 1905.

The President, HOWARD LILIENTHAL, M.D., in the Chair.

CALCULUS IN URETER; PERINEPHRIC ABSCESS.

DR. HOWARD LILIENTHAL presented a boy of twelve years, who was admitted to the medical service of Mt. Sinai Hospital on October 3, 1904. The diagnoses which were considered in his case were, first, typhoid fever, complicated by appendicitis; second, appendicitis alone; third, meningitis, complicated by appendicitis. His illness was of sudden onset, with high fever and rapid pulse. There was a leucocytosis of 20,000; no enlargement of the spleen; no eruption; no Ehrlich; no Widal. The fever was continuous, with only very slight remissions. There was an absence of the definite local signs of appendicitis.

A week after the boy's admission, the abdominal tenderness became localized in the right side, and there was acute sensitiveness in the right axillary line, below the third rib. When Dr. Lilienthal first saw him at this time, he noted the tenderness in the region of the appendix, but, on account of the large area over which it extended, the doubt as to diagnosis, and the absence of urgent symptoms, he advised against immediate operation, and suggested that the patient be poulticed and watched. This was done. The temperature continued to run up to 105.5° F. and the boy became much emaciated. Finally, he began to complain of pain in the right loin. Before that time, the possibility of a calculus in the ureter had been suggested, and this belief was subsequently strengthened by the presence of a few pus and red blood-cells in the urine.

The pain in the lumbar region persisted, and gradually very slight, deep doughy fluctuation could be made out in that area. On October 11, at Dr. Lilienthal's request, Dr. Elsberg made an incision over the right loin and found pus in the subphrenic region. A few days later there was a urinous discharge from the wound. Following this operation, the boy's temperature dropped, and he remained in good condition for a number of days. Then the temperature went up as high as before, and a nephrotomy was decided on, which was done by Dr. Lilienthal on November 16. A soft bougie was first inserted into the sinus, and then the kidney was cut down upon. The organ was very large and hard. It showed no evidences of suppuration, but there was evidently a collection of pus involving the perinephric tissues. Upon following down the ureter, he came upon the soft bougie, which had entered an old perforation of the ureter about two and one-half inches below the pelvis of the kidney. In spite of repeated efforts, the soft bougie could not be pushed down into the bladder, nor could colored fluids, introduced from above, be forced through the apparently occluded ureter.

The kidney was then incised and a finger introduced into its pelvis. No stone nor other abnormality could be discovered, nor could any calculus be detected in the ureter by instruments introduced from above. On account of the age of the patient, ureteral catheterization through the bladder was not attempted.

Several days after the operation, Dr. Lilienthal said he again attempted to force blue-colored fluid through the ureter from above, and about half an hour later a small quantity of greenish-tinged urine was passed. From this time on the boy's urine became very muddy, containing large quantities of mucus and pus, with some blood and casts. Several X-ray pictures, in different positions, were taken by Dr. A. G. Foord, assistant radiographist to the hospital, with the greatest care, but no stone could be detected. The kidney was flushed out daily by means of the injection of large quantities of water. The wound healed nicely, and on December 26 the boy was allowed to go home, with instructions to always urinate through several layers of gauze, so that in case a calculus was passed it would be detected. At this time the patient's condition was still unfavorable, and every four or five days he would have a sudden elevation of temperature. Three days ago his attending physician sent word that the cal-

culus had passed spontaneously, but that unfortunately it had been lost. With the expulsion of the stone, all the boy's symptoms disappeared, and the urine became clear.

Dr. Lilienthal said he believed that a radical operation for the removal of the stone in the ureter in this case might have resulted fatally. The patient's condition at the time was very poor, and such an operation would have necessitated a very long incision and a careful dissection. In the majority of cases of ureteral calculus, the speaker thought it was just as well not to operate, unless the X-ray showed the stone to be of such a size that its spontaneous expulsion seemed improbable.

In reply to a question as to the origin of the hole in the ureter, Dr. Lilienthal said it evidently must have resulted from an infection from the scraping of the stone. In reply to a question by Dr. Whitman, the speaker said that the limb on the affected side was not held in a flexed position. The so-called Meltzer sign—increased pain on hyperextension of the leg—was present.

CERVICAL RIB.

Dr. Lilienthal presented a woman who had been referred to him by Dr. Manges. About a year ago she began to complain of pain in the left shoulder and neck. This pain was cramp-like in character, and radiated down the left arm to the finger-tips. She suffered at times from palpitation of the heart, the attacks being especially severe after the pain. She also complained of occasional difficulty in swallowing, of headache, and of a girdle-like sensation about the throat.

On examination, nothing was found but a tumor in the neck, which was easily recognized as a cervical rib. On deep inspiration, the left pulse was completely obliterated. There was a bruit over the left subclavian artery, which ceased on deep respiration, and reappeared, with increased loudness, after holding the breath. The neck was tender on palpation.

On account of the patient's symptoms, an operation for the removal of the supernumerary rib was determined on, and it was done after an X-ray picture of the condition had been taken. Upon deciding in favor of an anterior operation, an incision was made directly over the rib between the fibres of the sternomastoid muscle. The soft parts were then pushed up as far as possible towards the cervical vertebra, with which the rib articulated pos-

teriorly. He then cut through the rib with the bone forceps, and twisted off its upper or posterior section. Anteriorly, it was found to be firmly attached by osseous union to the first rib, and, as all embarrassment to the circulation had been apparently relieved, no attempt was made to chisel off the anterior section of the bone. The rib was removed to the level of the rather high arch of the subclavian artery. Further dissection would have been attended by great danger. A large part of the scalenus muscle had a tendinous attachment to the rib.

Immediately after the operation, the tingling sensations in the left hand were slightly increased, but the pulse remained absolutely normal. Within the past few days, however, it had become intermittent, and was completely obliterated on deep inspiration. This Dr. Lilienthal attributed to the firm cicatrix resulting from the operation, and he thought the symptom would disappear permanently in time with the atrophy of the scar. A supernumerary rib also was present on the right side, but it was much smaller and gave no symptoms.

Dr. Irving S. Haynes said he thought this condition of cervical rib was comparatively rare, as he could not recall more than a single instance of it during a long experience in the dissecting-room.

Dr. George E. Brewer mentioned a case in which this abnormality gave rise to severe pain over the distribution of the brachial plexus on one side, which was relieved by removal of the rib. In this case the patient was for a time thought to be suffering from a malignant new growth.

Dr. Brewer said he had recently had the opportunity of looking over Professor Dwight's very beautiful collection of abnormalities of the ribs in the Anatomical Museum at Harvard University. This included many specimens of cervical and lumbar ribs, and asymmetries on both sides of the thorax.

Dr. Otto G. T. Kiliani said he did not think this condition was very uncommon. In a case that recently was under his observation, the patient had a carcinoma of the stomach, and, because of difficulty in swallowing, it was also thought that he had a cancer of the œsophagus. Upon investigation, it was found that the dysphagia was due to a spasm of the œsophagus produced by a right-sided cervical rib.

Dr. Lilienthal, in closing, said he had seen several cases

in which this abnormality existed, and he did not think it was very rare; but it was decidedly uncommon to see cases in which these supernumerary ribs gave rise to any symptoms. In the case he had shown, the symptoms had only been present a few months, and the speaker thought it was strange that they did not come on earlier in life. The symptom of spasm of the œsophagus to which Dr. Kiliani referred had also been present to some extent.

SPASMODIC TORTICOLLIS TREATED BY RESECTION OF NERVES.

Dr. Royal Whitman presented a woman, forty years old, who entered the Hospital for Ruptured and Crippled last summer with the history of having had spasmodic torticollis for the previous eight weeks. She had suffered a good deal of pain, and at frequent intervals the head would be drawn over to one side, the chin being tilted upward and turned in the opposite direction. On account of the short duration of the affection, it was decided to first try a resection of the spinal accessory nerve, and early last August about three-quarters of an inch of the nerve was removed at a point anterior to the sternomastoid muscle. This gave only partial relief, for, although the sternomastoid no longer participated in the spasm, the contraction of the posterior group was so strong that it was found impossible to control the movements of the head with apparatus. Four weeks later the posterior branches of the second and third cervical nerves were divided, and, as an additional precaution, the attachments of the muscles were separated from the occiput. Towards the end of the operation the vertebral artery was apparently wounded, and the violent hæmorrhage necessitated packing the wound.

Since the second operation the patient had been entirely relieved. There is no noticeable interference with the normal movements of the head, no difficulty in raising the shoulder, as is sometimes noticed after division of the spinal accessory nerve. The patient has been at work for several months.

Dr. Whitman thought his success in relieving the torticollis in this case was due to the fact that the operation was done early, before the spasm habit had been acquired.

Dr. Lilienthal asked Dr. Whitman how he explained the absence of shoulder paralysis in this case. The speaker said he

thought that disability always followed when the spinal accessory was cut so high up.

Dr. Whitman said there had been some weakness of the shoulder following the operation, but it had disappeared, probably through the aid of other muscles.

Dr. Charles L. Gibson asked Dr. Whitman whether he expected the cure to be permanent. He recalled a number of cases in which recurrences had taken place after different and sometimes very radical operations. In one case where he resected the spinal accessory and both branches of the third and fourth cervical nerves, and finally divided the sternomastoid muscle itself, there was a prompt recurrence of the spasm.

Dr. Charles H. Peck inquired as to the ultimate outcome of these cases when they were left undisturbed. He mentioned a case of quite severe spasmodic torticollis in which resection of the spinal accessory was done ten years ago. There was slight improvement after the operation, and the patient subsequently submitted to various forms of treatment with indifferent success. Finally, after about two years, the spasm gradually disappeared of its own accord. Very recently the patient had expressed the fear that the twitching was beginning again.

Dr. George E. Brewer said that in one case where he had cut the spinal accessory nerve there was temporary improvement. He then cut the sternocleidomastoid muscle, and again there was temporary improvement. In another case he divided the spinal accessory and the second, third, and possibly the fourth cervical nerves, in addition to cutting the muscle. The patient was entirely relieved for a time, but the spasm soon returned. It sometimes happened, Dr. Brewer said, that, with an anomalous distribution of the spinal accessory, only part of the sternomastoid was affected by its division. Dr. M. Allen Starr had made the suggestion that in some cases the lesion in spasmodic torticollis was cortical, although that theory could not be proven.

Dr. Kiliani mentioned a severe case of spasmodic torticollis in which he resected the second, third, and fourth cervical nerves. In spite of this, the patient's head was still drawn to the right, although the spasm had ceased. From this case he had gained the impression that the innervation of these muscles was sometimes anomalous.

Dr. Lilienthal thought that, if the lesion in these cases was

a cortical one, resection of the cervical nerves ought to control the spasm. He suggested that lengthening the muscle by a plastic operation might have a beneficial effect. If the muscle could be lengthened to such a degree as to well over-correct the spasm, the deformity would not be so pronounced.

DR. WHITMAN, in closing, said that he was surprised to learn that the prognosis was thought to be so bad after operation for this condition. Richardson and Walton, of Boston, who had reported by far the largest number of operations, found lasting benefit resulting in a majority of their cases. In reply to Dr. Peck, the speaker said that the ultimate outcome of this condition, if left undisturbed, was not extremely unfavorable, since spontaneous recovery was not unusual after several years; but in the meantime the patients suffered a good deal of pain and discomfort both physical and mental, and were practically incapacitated. He did not think that much could be accomplished by overstretching the muscles or by plastic work. There were too many muscles in this collection to lengthen them all. While neurologists knew nothing positive about the etiology of spasmodic torticollis, they usually looked upon it as a cortical lesion. After the condition had existed for a number of years, the affected muscles became hypertrophied and permanently shortened. The mental and moral effect of such a noticeable and disabling affection must also make the operative diagnosis worse in cases of this class.

SMALL, ROUND-CELLED SARCOMA OF THE BACK SUCCESSFULLY TREATED BY THE X-RAY COMBINED WITH THE MIXED TOXINS OF ERYSIPELAS AND BACILLUS PRODIGIOSUS.

DR. WILLIAM B. COLEY presented a boy of eleven years, whose family history was good. In the latter part of August, 1901, he fell from a stoop, striking on his back. Two or three weeks later his mother noticed a swelling in the midscapular region, a little to the left of the median line. This swelling increased very rapidly, and was soft and fluctuating from the beginning. The patient was referred to Dr. Coley on December 23, 1901, by Dr. Polhemus, of Nyack, New York.

Physical examination showed a cystic swelling, the size of an orange, in the left scapular region. The skin was normal. The tumor was fluctuating, and situated, apparently, beneath the skin

and superficial fascia. A diagnosis of hæmatoma was made, and on January 12, 1902, an incision was made under ether anæsthesia. Several ounces of dark blood were evacuated. There was no evidence of any solid tumor at this time. The wound was closed without drainage, and healed by primary union. About three weeks later a tumor began to develop at the original site. This was also cystic in character, and increased rapidly in size until May 6, when it had become one-third larger than that previously operated upon. It was again incised under ether, and at this time, in addition to fluid blood and clots, there was such a thickening of the walls of the cyst that it raised a suspicion of sarcoma. A portion of this thickened tissue was removed and examined by Dr. H. T. Brooks, Professor of Pathology at the Post-Graduate Hospital, who pronounced it a small, round-celled sarcoma of high vascularity.

Two weeks after the operation, and before the wound had entirely healed, the X-ray treatment was begun, and continued, three times weekly, during the entire summer and fall of 1902. In December of the same year there was still marked evidence of local recurrence in and about the cicatrix. The tumor continued to increase in size in spite of X-ray treatment. On January 26, 1903, Dr. Coley operated for the third time, and removed the recurrent tumor, together with the old cicatrix. The wound healed by primary union. Shortly after the patient left the hospital, the X-ray treatments were resumed, and continued once or twice weekly during all of 1903 and the first half of 1904. In June of that year signs of another recurrence were noted in the old cicatrix, and at this time, in addition to the X-ray treatment, he began the injections of the mixed toxins of erysipelas and Bacillus prodigiosus in the vicinity of the scar. The injections were continued from July 4 up to the present time, a period of about six months, in addition to two X-ray treatments weekly. Under this combined treatment, the recurrence slowly disappeared, and the ulcerated area healed over. At the present time there was no trace of a growth visible anywhere. The boy's general health had always remained perfect.

SARCOMA OF THE FEMUR.

Dr. Coley presented a man, nineteen years old, who first noticed a swelling in the lower portion of the left femur in Novem-

ber, 1901. This gradually increased in size, and was accompanied by loss of weight and deterioration of general health. The patient came under Dr. Coley's observation February 5, 1902. At that time physical examination showed a large tumor extending from the condyles of the left femur to the junction of the middle and upper thirds. The tumor consisted of a fusiform enlargement of the entire lower two-thirds of the femur; on the outer aspect of the thigh, about one and one-half inches above the joint, there was a soft, fluctuating area, just covered by thin and reddened skin. There was also impairment of the functions of the joint, but no swelling of the joint itself. An incision was made under cocaine into the fluctuating area, and three ounces of clear serum, similar to that which is found in cystic degeneration of sarcomatous tissue, was evacuated. The curette passed into the cavity of the bone, and typical sarcomatous tissue was removed. Microscopic examination by Dr. E. K. Dunham showed it to be round-celled sarcoma. *The patient absolutely refused operation, although he was told that this was the only thing that offered any hope of saving his life.* The X-ray treatment was tried entirely as an experiment, with the result that the tumor decreased one inch in circumference. After a month's treatment the exposures were discontinued for two weeks, at the end of which time the tumor had increased nearly an inch in size. The treatment was again resumed and the growth slowly decreased in size, until at the end of another month the circumference of the thigh over the centre of the tumor was one inch less than the original measurement. The treatment was continued four times a week up to September 30, 1902, when the leg was nearly normal in size and the patient had gained twenty pounds.

In December, 1902, a metastatic tumor developed in the left pectoral region. This grew rapidly, until it had reached the size of a hand, and was then partially removed under ether anæsthesia. It was found to be very soft and highly vascular. Shortly after this, a large tumor, the size of a child's head, developed in the right iliac fossa, extending from the costal cartilages down to the pelvis. It could be easily felt in the lumbar region. At this time, in addition to the local treatment with the X-rays in the femoral and pectoral regions, injections with the mixed toxins of erysipelas and Bacillus prodigiosus were begun. After a few weeks the large tumor in the iliolumbar region began to soften and break

down, and when it had become completely fluctuating, it was opened posteriorly. A very large quantity of necrotic tumor tissue was evacuated, and the wound was drained for about a year. While the tumor in the leg had apparently disappeared, there remained a marked thickening of the bone, and the sinuses leading to the broken-down areas persisted. Examinations of several curettings failed to show any evidence of sarcoma. At the present time, aside from the sinus in the leg, the boy appeared to be in perfect health, and there was no evidence of sarcoma to be found anywhere.

In view of the fact that periosteal round-celled sarcoma was probably the most malignant of all varieties, running its entire course in from one to two years if left untreated, and usually recurring and proving fatal within a year after hip-joint amputation, the result in this case, whether it proved curative or not, was extremely interesting. Dr. Coley said that in all of the six cases in which he had performed hip-joint amputation, recurrence took place within a year, and death within eighteen months.

Dr. Lilienthal said he was using the mixed toxins of erysipelas and Bacillus prodigiosus in all his inoperable cases of sarcoma, and also in those cases where he had the slightest suspicion that some of the malignant tissue was left behind after operation. He had seen some rather remarkable results following the use of the toxins. In one case of partial extirpation of a pigmented, cystic, giant-celled sarcoma of the rib and involving the costal pleura, the patient had remained well up to the present time, a period of over two years. In that case a prompt recurrence was confidently expected, and that it did not take place was apparently due to the use of the toxins.

Dr. Coley, in reply to a question, said he had seen deep-seated malignant tumors disappear under the use of the X-rays alone, but in every single instance there had been a recurrence within six months.

DISINFECTION OF THE SKIN.

Dr. Robert H. M. Dawbarn read a paper upon the above subject.

Dr. Lilienthal said he thought that rubber gloves should be first filled with water and then boiled. Any bacteria that were

not killed by boiling in plain water could be destroyed by boiling in soda solution. The speaker said that, while he thought the gloves should be worn for every operation, there were certain examinations in which they undoubtedly impaired the delicate touch of the uncovered finger. As an example of this, he cited the case where a cotton swab had been left in the female bladder. In searching for this the naked finger was used for obvious reasons. In connection with the closure of wounds, Dr. Lilienthal called attention to the value of zinc plaster whcrever that method was feasible.

Dr. Brewer said that the question of the infection of wounds from bacteria of the skin had come up for discussion at the meeting of the American Surgical Association in St. Louis last summer, and Dr. Harrington, of Harvard University, had made the assertion that his experiments had shown that the sweat bacteria were much less dangerous than they were formerly thought to be.

Dr. Brewer said he was strongly in favor of the use of rubber gloves. At Roosevelt Hospital they still employed the simpler methods of hand disinfection, using for that purpose biehloride solution, and sometimes the lime and soda. For the gloves themselves they used sterilized starch and talcum powder. The infection of wounds was such a complex question, and depended on so many factors, that it could not be solved by merely wearing gloves. One of the most important factors was the preliminary cleansing of the skin. Dr. Mayo had recently expressed the view that there was a certain tolerance of the skin for the micrococci that lived there, and that this tolerance was diminished by irritating the skin. In accordance with that view, he had adopted the plan of irritating the skin as little as possible. Instead of using a stiff brush, as they formerly did at Roosevelt Hospital, and applying various irritating applications, they now usually limited themselves to the use of a soap solution applied with a piece of gauze, and this method had been followed by a decided reduction in the number of cases of wound infection. During the past six months they had not had a single case of infection in a clean wound; previous to that, the longest period of immunity had been four months.

Dr. Dawbarn said that boiling rubber gloves in soda solution, as just suggested by a member, would cause them to rot. One of the objections he had to using surgeons' plaster in the

closing of wounds, as suggested by the President, was that the plaster was not transparent, and infection might occur underneath it, even if in narrow strips, without being observed. He entirely agreed with Dr. Brewer that the methods resorted to to render the skin and hands aseptic should be simplified as much as possible; and it was with that object in view that he had written his paper. Upon reflection, it will be seen that neither in time nor work is the preparation of the hands increased; the certainty of asepsis is greater, and the irritation of the skin is less by the plan advocated to-night. He did not favor the use of starch and talcum in the rubber gloves as used at Roosevelt Hospital, because those powders did not dissolve in water or serum, and so, if entering a wound unobserved, through a small cut, remained as mechanical irritants. Dr. Brewer's excellent results quoted, as to asepsis, were not due to the Roosevelt methods, but to avoidance of wounding gloves. The personal equation was an important factor in considering the poisonous qualities of the sweat: that of some persons was very toxic, while that of others was comparatively innocuous. That the danger of infection increased with the irritation of the skin, whether that of surgeon or that of patient during preparation for operation, was a self-evident fact. Even reddening the skin should be avoided. When a chemical strong enough to blister was applied to the skin, infection almost invariably followed. Irritation, likewise, from undue pressure upon the skin by buttons or plates used with retention sutures, would regularly invite suppuration at these points, by stirring up a hornet's-nest activity of the microbic dwellers just beneath, deep in the skin. This was a particularly common mistake of inexperienced operators.

FOREIGN BODY IN THE KNEE-JOINT.

Dr. Robert H. M. Dawbarn exhibited a radiograph, obtained from a child six years old, that was brought to him with a history of increasing pain with slight swelling in the left knee-joint for the previous five days. There was no history nor local evidence pointing towards any wound or trauma. But the day before being brought to Dr. Dawbarn, a slight chill was observed. As a matter of suspicion only, the child was sent to Dr. Milton Franklin, who first with the fluoroscope and then with the accom-

panying radiograph (Fig. 1) absolutely demonstrated the presence of a foreign body (needle) in the joint. It was removed without special difficulty, and the joint being then flushed first with 1 to 2000 warm bichloride solution, then with normal salt solution. The result was absolutely perfect, not even any stiffness of the joint remaining.

RESULT OF OPERATION TEN YEARS AGO FOR MORTON'S METATARSALGIA.

Dr. Dawbarn presented a radiograph showing the result after ten years of a resection of the head of the fourth metatarsal bone done for the relief of metatarsalgia (Fig. 2). The operation, the speaker said, was not followed by any deformity, and immediately and permanently cured the pain. It consisted in removing the head and neck of one of the two metatarsal bones that were in contact so as to nip the nerve occasionally between their spurs. The "ring-toe" (fourth) was the one most frequently so treated; but the nerve in any of the four spaces may be involved, and sometimes more than one. The late Dr. Morton's favorite operation for this condition was to cut out the entire joint; but Dr. Dawbarn said he did not see the necessity for such an extensive procedure. Another method used by some was to amputate the toe, together with the joint and its metatarsal head and neck; and, finally, some operators have searched for and excised a piece of the nerve in question. This last plan is by no means easy. If attempted, the incision must be on the dorsal surface. No cut should be made on the plantar surface, so as not to leave a scar upon which pressure would be exerted in walking. The pain suffered by these patients was often agonizing, and was chiefly complained of after the shoes were taken off.

Dr. Whitman said that metatarsalgia was a very common affection. He was surprised to hear Dr. Dawbarn say that the pain was usually worse after removal of the shoes, since in his experience it was almost always the wearing of the shoe that induced the pain. The disability, of which the so-called Morton's toe was but one variety, was due to a depression or laxity of the metatarsal arch of the foot. The indications were to support the arch for a time, to restore the normal strength by exercises, and to wear proper shoes. He thought that operative measures, of

FIG. 1.—Needle in knee-joint.

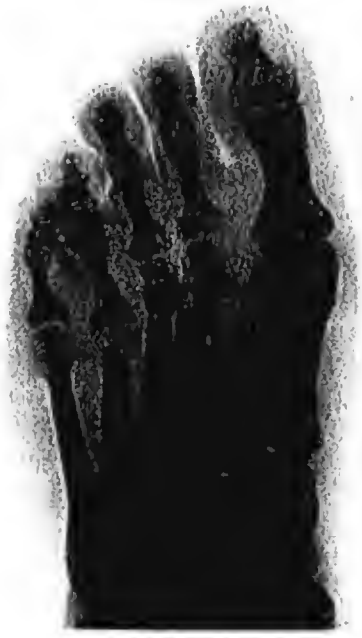

FIG. 2.—Showing condition of bones of foot ten years after excision of head of fourth metatarsal for metatarsalgia.

which that illustated was the best, were now practically obsolete as a routine treatment.

Dr. Haynes said his own personal experience with metatarsalgia tended to bear out Dr. Whitman's statements. If he pinched his foot in a narrow shoe, the pain was severe, but was relieved by removing the constriction. He had seen the pain in these cases immediately relieved by the use of properly constructed shoes and steel insoles, to quickly return when the support to the arch of the foot was removed.

Dr. Dawbarn said the trouble in these cases seemed to be due to the fact that the normal transverse arch of the foot made by the metatarsal heads was not properly maintained. When this condition was remedied by the use of a proper shoe, tight over the metatarsal bases and loose opposite their heads, the patient would be perfectly comfortable. In at least a dozen cases he had seen, the pain seemed to be more severe when walking in slippers or bare feet than in ordinary shoes. The operation of choice, the radical cure of this condition, was extremely simple, taking only from five to seven minutes, was done absolutely safely and under cocaine, and insured a permanent success. In the instance in evidence to-night the shaft of the fourth metatarsal was nipped across just behind its neck by an ordinary bone forceps. As the radiograph shows, this entails a slight degree of crushing of bone; but it was done ten years ago, before the Gigli wire saw was invented,—the tool to use to-day. It is indifferent which bone, on either side of the nerve being occasionally nipped by their "spurs" coming into juxtaposition, to attack. The cure is certain and instant in either case. And as the X-ray picture also shows, the toe so treated does not sink back. The transverse fasciculi of ligaments opposite the heads will prevent that.

It is, of course, admitted that this is only one form of this trouble,—the case shown to-night; but the cure is equally prompt and sure in all; and hence Dr. Dawbarn thought it preferable to any orthopædic plan, involving years of treatment, and then without any certainty of a cure, unless the appliances are always worn.

Dr. Whitman said that the case reported by Dr. Dawbarn was one variety of a very common disability that existed in every grade of severity. One should aim rather to restore the normal condition than to merely accommodate the part to deformity.

THROMBUS OF THE LEFT COMMON CAROTID ARTERY.

DR. IRVING S. HAYNES, through the courtesy of Dr. M. G. Schlapp, presented a specimen obtained from a case of epithelioma of the lip and chin, for which condition a ligation of the left common carotid was done. A segment became detached from the resulting thrombus, plugged the middle cerebral artery, and produced softening of the brain and death.

Stated Meeting, January 25, 1905.

GEORGE WOOLSEY, M.D., in the Chair.

CHRONIC TENOSYNOVITIS.

DR. CHARLES H. PECK presented a woman, thirty-five years old, a patient of Dr. Royal Whitman. When first seen last November she presented an elongated tumor, evidently a tenosynovitis affecting the extensor tendons on the radial border of the hand, and another, the size of a small egg, at the bend of the elbow. The duration was about eighteen months, and the disability, of the nature of weakness and discomfort, was increasing. At operation, the two extensors of the thumb and the radial extensors were found to be involved, while that at the elbow surrounded the tendon of the biceps. The affection had been classed as tuberculous, but this diagnosis was not confirmed by the pathologist. The functional cure was apparently complete.

DOUBLE CASTRATION FOR TUBERCULAR TESTICLE.

DR. GEORGE D. STEWART presented a man, thirty-five years old, who was admitted to Bellevue Hospital in 1901. One of his brothers had suffered from tuberculosis, and his mother had diabetes; otherwise the family history was not significant. He was not addicted to the use of alcoholic stimulants. He had never sustained any injury and has had no illness, with the exception of repeated attacks of gonorrhœa. His first attack occurred nine years before admission, and was treated for nine

months. Almost every year since that time he had had attacks of gonorrhœa, or what appeared to be such, and each of these persisted for several months under treatment.

Four years before admission he began to suffer from pain in the posterior portion of both testes, which disappeared while in the recumbent position. Eighteen months ago he had an attack of gonorrhœa which persisted for about three months, when an abscess in the region of one testis developed. This was opened by his family physician. Since then he had had a number of similar abscesses, the last one in November, 1900. After this was incised, his pain disappeared until early in 1901, when another abscess formed. After this he complained very much of pain in the back and inguinal regions, more severe at night.

At the time of the patient's admission to the hospital, an examination showed that both testes were involved, the left to a greater extent than the right. In both testicles there were discharging sinuses and the pain was constant and severe. On March 20, 1901, both testes were removed, together with the structures of the cord, following them up as deeply into the pelvis as possible, through widely opened inguinal canals. Through the incisions, the enlarged and nodular seminal vesicles could be felt, but they were not removed. The wound was closed, and healed without any trouble. Gross examination of the testicles showed that they were lobulated and studded with caseous nodules, involving the epididymis on both sides, and that both vasa deferentia were involved. The left testis contained many pus cavities. The diagnosis of tuberculosis of the testes was confirmed microscopically.

Since the operation, which was done nearly four years ago, the patient had gained over forty pounds in weight, in spite of his indoor occupation as a tailor. Absolutely no mental disturbances followed the operation. The patient stated that he had frequent erections, although of short duration. There were no signs of a recurrence; no frequency of micturition nor other bladder symptoms, and the urine was normal, showing no evidence of prostatic inflammation.

Dr. Stewart said that when this operation was done, radical measures for the relief of this condition were much more in vogue than at present; and in addition to removing the testes, removal of the seminal vesicles, which were apparently involved,

was suggested, but the patient refused his consent. To that extent, therefore, the operation in this case might be regarded as a conservative one. In cases where the testes were undoubtedly involved as well as the epididymis, and particularly where there were open sinuses, the speaker said he thought the proper and conservative operation was castration.

TUBERCULOSIS OF THE TESTICLE; EPIDIDYMECTOMY; GRAFTING OF THE VAS INTO THE GLOBUS MAJOR.

Dr. Irving S. Haynes presented a paper with the above title, for which see page 745.

Dr. John A. Hartwell asked Dr. Haynes which operation he would recommend in a case where the testicle was actually involved? Whether he would do a castration or simply scrape out the sinuses? It was very important, he thought, to substantiate the claim that these patients could be cured by a less radical operation than castration, on account of the psychical effects that sometimes followed removal of the testes. In order to show, however, that such mental phenomena did not invariably follow, the speaker mentioned a case that had been brought to his notice by Dr. McWilliams, of the Presbyterian Hospital. The patient was a young engineer, twenty-two years old, who ablated his entire scrotum, including both testes. The reason he gave for this when he was brought to the hospital was that he had previously injured his scrotum by running a nail into it, but he subsequently admitted that he had cut off his testes because they had proved such a source of annoyance to him by interfering with his application to his studies. When the man was seen three years later his condition was apparently normal, and he showed no mental or other symptoms, and no regret at what he had done.

Dr. Benjamin T. Tilton said that his own experience had led him to favor a conservative method of treating these cases. He had seen a number of cases in the early stages of the disease in which epididymectomy was followed by excellent results. He recalled one case in which the sequence of events was as follows: An attack of gonorrhœa was followed by a urethral stricture; dilatation of this was quickly followed by an epididymitis, and subsequently by tuberculosis of the corresponding testis, which was removed. About three years later the opposite testis became in-

volved. It was first treated expectantly, and, finally, an epididymectomy was done. This patient was kept under observation more than four years after the last operation, and showed no signs of recurrence of the disease. The testis appeared perfectly normal, the patient had good sexual power, and his general health was greatly improved.

Dr. Tilton said he had never attempted to graft the vas into the globus major or into the testis, and he thought it would be a difficult matter to bring about such a union as would permit of the passage of semen. In a case that had come under his observation recently, the vas was accidentally completely divided during a difficult operation for hernia. At the suggestion of Dr. Stewart, he sutured it, first passing a catgut thread through each end. An epididymitis developed, but union of the divided ends of the vas apparently took place. At any rate, there had thus far been no change in the size of the affected testis. What the ultimate outcome would be he was unable to foretell.

Dr. Stewart said there were many, including Guyon, who believed that the primary focus of tuberculosis of the testicle was in the prostate, and extended secondarily to the epididymis. The weight of clinical evidence, so far as his experience went, seemed to show, however, that the disease usually began in the epididymis, and extended on the one hand into the testis and on the other into the prostate. When the disease had actually involved the testis, and sinuses had formed, the speaker thought there could be no question as to the advisability of doing a castration; and he did not believe that even the most ardent advocate of epididymectomy would recommend that operation under those circumstances. The only possible reason for leaving the testes under those conditions would be to prevent the possible mental disturbance that might follow their removal.

Dr. Hartwell, referring to the statement in the paper that, in order to produce tuberculosis locally in animals by injecting the bacilli in the circulation of the testes, it was necessary to produce a certain degree of venous stasis, said this was interesting as opposed to the Bier treatment of joint tuberculosis, where a venous stasis was artificially produced in order to inhibit the growth of the bacilli.

Dr. Stewart said he thought the blood stasis artificially pro-

duced by the Bier method of treating tubercular joints was different from that referred to by Dr. Tilton.

Dr. Hartwell said that Dr. Willy Meyer had shown at least one case of tubercular joint disease successfully treated by the Bier method. The stasis was kept up as long as the patients could tolerate it. The principle upon which the method was based was that persons with a chronic heart lesion which produced pulmonary venous congestion rarely suffered from pulmonary tuberculosis.

Dr. George Woolsey said he had been struck by the beneficial effect of climatic and hygienic treatment in the treatment of cases of surgical tuberculosis, especially those of the genito-urinary tract. The results were equally as good as those obtained by operative treatment in cases where there was some bladder or prostatic lesion.

As to the original focus in cases of tuberculosis of the testicle, Dr. Woolsey said he had been led to believe that the epididymis was more often primarily involved than some of the statistics on the subject would indicate. He recalled a possible example of a case originating otherwise in the case of a coachman who gave a history of having injured his scrotum some months previously while jumping onto his bicycle. A swelling developed on the left side, which was tapped by some physician, who then advised operation. Subsequently, when Dr. Woolsey saw him, there was some fluid in the tunica vaginalis; this was of a dark, yellow color, and thicker than the ordinary fluid of hydrocele. After its evacuation, the body of the testis felt distinctly nodular. On exposure by operation, its surface was here and there covered by raised, flattish masses resembling partly organized and decolorized film. Otherwise, the testis was apparently healthy. Some of this tissue was scraped off, and the pathologist reported that it appeared to be tubercular in character, from the presence of giant cells. The gross appearance did not confirm this opinion, and the pathological findings were not positive, and open to question.

Dr. Woolsey said he did not think it was good surgery to leave the testis when it was markedly involved, nor to remove it when the tubercular disease was limited to the epididymis. He had tried the method of injecting these cases with an emulsion of iodoform, but when sinuses and mixed infection existed, it was

difficult to obtain a cure by this method without scraping or some more radical operation.

DR. HAYNES said that before deciding upon the character of the operation in a case of tuberculosis of the testis, the surgeon should endeavor to place himself in the position of the patient, and do as he would be done by. As to the location of the original focus of the disease, he thought the consensus of opinion was that it usually began intertubular in the connective tissue of the epididymis. The older teaching was that tuberculosis of the testicle was a descending infection from the prostate or seminal vesicles, but the speaker thought that theory had been disproven, and that in the majority of cases the infection came through the blood-vessels of the epididymis. Undoubtedly, it could occur as a descending infection, and also, though rarely, through the lymphatic system.

The extent of the involvement in these cases, Dr. Haynes said, should determine the nature of the operation. If the testis was much involved, it should be removed entirely. In one of Murphy's cases, the tunica vaginalis, which was involved together with the epididymis, was dissected off, and the testis itself was left behind. In many cases of unilateral castration for tuberculosis, the opposite testis subsequently became involved.

DR. CHARLES H. PECK mentioned a case that came under his observation about six months ago, in which a unilateral castration was done for tuberculosis of the gland. At the time of this operation, the opposite testis was apparently normal, and remained so, as far as could be made out. In doing the castration, the cord was removed above the point of involvement. Several months after the operation, the patient developed a tubercular meningitis, which proved fatal. The speaker raised the query whether there was any special liability to a general infection from a tubercular focus in the testis.

DR. HAYNES said the statistics showed that unilateral castration was followed by only 46 per cent. of cures. In the fatal cases, death was usually the result of tuberculosis in other parts of the body. With a tubercular focus in the testis, it was just as possible for the disease to become disseminated as when the focus was situated in any other organ of the body. In closing, Dr. Haynes spoke of the ease with which the operation of epididymectomy could be done under cocaine anæsthesia. This fact

might be used as an argument to get the early consent of patient to submit to an operation.

INCOMPLETE NEPHRECTOMY FOLLOWED BY PERSISTENT SINUS.

DR. CHARLES L. GIBSON presented a specimen removed from a woman, thirty-two years old, who was operated on eight months ago by another surgeon for tuberculosis of the kidney. The kidney, it appeared, was pyonephrotic, and proved so difficult to remove that it was necessary to resect a portion of three ribs before it could be taken out. Following the operation, a sinus developed, which persisted, and when Dr. Gibson reopened the wound he found the pelvis of the kidney which had been left behind by the original operator, and which was the cause of the purulent discharge.